UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(S)	Jheroen P. Dorenbosch	Confirmation No.:	5357
APPLN. NO.:	10/610,500	EXAMINER:	Bob A. Phunkulh
DATE FILED:	June 30, 2003	ART UNIT:	2616
TITLE:	FAST HANDOVER THRU PROACTIVE REGISTRATION		

AMENDMENT

Mail Stop AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This communication is responsive to the Office Action mailed April 5, 2006, concerning the above-identified application.

Claims:

1. (Original) A communications unit comprising:

a receiving device for receiving signals from a first and a second wireless communications network;

a controller, coupled to and controlling the receiving device, for detecting a condition indicative of initiating communication over the first wireless communications network; and

a transmitting device, coupled to and controlled by the controller, and cooperatively operating with the receiving device and the controller for facilitating the communication over the first wireless communications network and for facilitating registration with the second wireless communications network when the controller detects the condition.

2. (Original) The communications unit of claim 1, wherein the receiving device is further for receiving a beacon signal;

wherein the controller is further for detecting beacon information included with the beacon signal, the beacon information indicative of a location of the communications unit; and

wherein the registration with the second wireless communications network is facilitated when the controller detects both the condition and the beacon information.

3. (Original) The communications unit of claim 1, wherein the controller is further for determining a coverage quality corresponding to the first wireless communications network, and wherein the registration with the second wireless communications network is facilitated when the controller detects the condition and when the controller determines that the coverage quality satisfies a predetermined threshold.

4. (Original) The communications unit of claim 1, wherein the controller is further for determining a coverage quality corresponding to the second wireless communications network, and wherein the registration with the second wireless communications network is facilitated when the controller detects the condition and when the controller determines that the coverage quality satisfies a predetermined threshold.

5. (Original) The communications unit of claim 1, wherein the controller is further for detecting an other condition indicative of one of a completion of the communication over the first wireless communications network, a completion of a communication over the second wireless communications network, and when the communication was never initiated, and wherein the controller cooperatively with the transmitting device and the receiving device facilitates deregistration from at least one of the first wireless communications network and the second wireless communications network when the controller detects the other condition indicative of the completion of the communication.

6. (Original) The communications unit of claim 1, wherein the controller is further for detecting a location of the communications unit, and wherein the registration with the second wireless communications network is facilitated when the controller detects the condition and that the location of the communications unit is within a first predetermined range.

7. (Original) The communications unit of claim 6, wherein the controller is further for detecting if the location of the communications unit is within a second predetermined range, and wherein the

registration with the second wireless communications network is facilitated when the controller detects the condition and that the location of the communications unit has changed from the first predetermined range to the second predetermined range within a predetermined time period.

8. (Original) The communications unit of claim 1, further comprising a motion detector in communication with the controller for detecting a motion of the communications unit, and wherein the registration with the second wireless communications network is facilitated when the controller detects the condition and that the motion of the communications unit exceeds a predetermined motion threshold.

9. (Original) The communications unit of claim 1, wherein the condition comprises at least one of:

accessing a communications unit phone book; dialing a number; opening a hinged cover of the communications unit; and entering a key for access to the communications unit.

10. (Original) The communications unit of claim 1, wherein the first wireless communications network comprises a first one of a wireless local area network (WLAN) and a wireless wide area network (WAN) and wherein the second wireless communications network comprises a second one of the WLAN and the WAN.

11. (Currently Amended) A software program A computer-readable medium containing computer instructions for instructing a processor to perform a method for facilitating a fast handover of a link with a communications unit between a first and a second wireless communications network, the

instructions comprising: ~~the software program when installed and executing on a controller of the communications unit resulting in the communications unit:~~

registering with the first wireless communications network;

detecting a condition indicative of initiating a communication over the first wireless communications network; and

registering with the second wireless communications network upon the detecting of the condition.

12. (Currently Amended) The ~~software program~~ computer-readable medium of claim 11, further comprising:

detecting a beacon signal indicative of a location of the communications unit; and

registering with the second wireless communications network upon the detecting of the condition and the detecting of the beacon signal.

13. (Currently Amended) The ~~software program~~ computer-readable medium of claim 11, further comprising:

determining a coverage quality corresponding to at least one of the first and the second wireless communications networks; and

registering with the second wireless communications network upon the detecting of the condition and the determining of the coverage quality.

14. (Currently Amended) The ~~software program~~ computer-readable medium of claim 11, further comprising:

initiating the communication over the first wireless communications network.

15. (Currently Amended) The ~~software program~~ computer-readable medium of claim 14, further comprising:

completing the communication over the first wireless communications network; and

deregistering from at least one of the first and the second wireless communications networks upon the completing of the communication.

16. (Original) A method for facilitating handover of a link with a communications unit between wireless communications networks employing different technologies, the method comprising:

operating exclusively on a first wireless communications network;

detecting an action preparatory to initiating a call;

initiating the call using the first wireless communications network; and

upon the detecting of the action, registering with a second wireless communications network.

17. (Original) The method of claim 16, further comprising:

observing beacon information transmitted by the first wireless communications network near a border of a coverage area of the first wireless communications network;

registering with the second wireless communications network upon the detecting of the action and the observing of the beacon information transmitted by the first wireless communications network.

18. (Original) The method of claim 16, further comprising:

detecting coverage quality corresponding to the first wireless communications network; and

registering with the second wireless communications network upon the detecting of the action and the detecting of the coverage quality.

19. (Original) The method of claim 16, further comprising:

detecting coverage quality corresponding to the second wireless communications network; and

registering with the second wireless communications network upon the detecting of the action and the detecting of the coverage quality.

20. (Original) The method of claim 16, further comprising:

completing the call over the first wireless communications network; and

de-registering from at least one of the first and the second wireless communications networks upon the completing of the call.

21. (Original) The method of claim 20, wherein the operating exclusively on the first wireless communications network further comprises starting up a first stack corresponding to the first wireless communications network;

wherein the registering with the second wireless communications network further comprises starting up a second stack corresponding to the second wireless communications network; and

wherein the de-registering from the at least one of the first and the second wireless communications networks comprises dropping at least one of the first and the second stacks.

22. (Original) The method of claim 16, further comprising:

detecting a location of the communications unit;

determining if the location of the communications unit is within a first predetermined range; and

registering with the second wireless communications network upon the detecting of the action and the determining if the location of the communications unit is within the first predetermined range.

23. (Original) The method of claim 22, further comprising:

determining if the location of the communications unit changes from the first predetermined range to a second predetermined range within a predetermined time period; and

registering with the second wireless communications network upon the detecting of the action and the determining if the location of the communications unit changes from the first predetermined range to the second predetermined range within the predetermined time period.

24. (Original) The method of claim 16, further comprising:

detecting a motion of the communications unit; and

registering with the second wireless communications network upon the detecting of the action and the detecting of the motion of the communications unit.

25. (Original) The method of claim 16, wherein the first wireless communications network comprises a first one of a wireless local area network (WLAN) and a wireless wide area network (WAN) and wherein the second wireless communications network comprises a second one of the WLAN and the WAN.

REMARKS

Claims 1-25 remain in the application. The actions taken are in the interest of expediting prosecution and with no intention of surrendering any range of equivalents to which Applicants would otherwise be entitled in view of the prior art. Moreover, the amendment or cancellation of claims herein is without prejudice to pursuing claims of different scope by way of continuing Application. Reconsideration of this application is respectfully requested.

35 U.S.C. § 101

Claims 11-15 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. Claims 11-15 have been amended to more particularly point out the invention and are believe to be statutory subject matter. Therefore, Applicants respectfully request that this reject be withdrawn.

35 U.S.C. § 103

Claims 1-25 stand rejected under 35 U.S.C. §103(a) as being unpatentable by Bridgelall, U.S. Pat. Application No. 2002/0085516 (hereinafter "Bridgelall") in view of McConnell (U.S. Patent No. 6,970,719, hereinafter McConnell). Applicants' respectfully traverses this rejection.

It is incumbent upon the Examiner to prove a *prima facie* case of obviousness (MPEP 2142). To establish a *prima facie* case three basic criteria must be met. First, the prior art reference must teach or suggest all the claim limitations. Second, there must be a reasonable expectation of success. Finally, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference.

Specifically, claim 1 includes the limitations "detecting a condition indicative of initiating a communication over the first wireless communication network" and "facilitating registration with the second wireless communications network when the controller detects the condition." Claim 11 includes the limitations "detecting a condition indicative of initiating a communication over the first wireless communication network" and "registering with the second

wireless communications network upon the detecting of the condition." Claim 16 includes the limitations "detecting an action preparatory to initiating a call" and "upon the detection of the action, registering with a second wireless communications network."

Bridgelall teaches a method for seamless voice/data roaming between a WWAN and a WLAN using an explicit call transfer (ECT) command. In order for seamless voice/data roaming as taught by Bridgelall to function, a voice or data traffic connection must already be in progress (paragraphs 062, 066, 069). In other words, Bridgelall teaches that seamless roaming, where *roaming begins once a WWAN voice connection is in progress and a WLAN network association has already been established* (paragraph 066).

To elaborate, Bridgelall discloses a mobile station able to vertically roam in either direction between two networks (abstract). Figure 11 illustrates the overall processes 1100 for seamless active voice/data roaming between WWAN 1101 and a WLAN 1103. For Seamless Vertical Roaming (SVR) to be accomplished, simultaneous signaling in one network must be feasible between a full traffic connection in the other network (Paragraph 0062). Two different processing states achieve simultaneous GSM/GPRS and WLAN communications, but where the voice traffic connection and signaling processes in either network are interleaved, simultaneous voice and data traffic are not expected on both WLAN and the GSM. *Transitions from one network to another are only possible once the signaling process is complete and the basic connection is already established on the second network* (Paragraph 0062).

As indicated by the Examiner, an outgoing VoIP call from the WLAN radio to a remote party on the WLAN will transition or seamlessly switch over to the WWAN connection when the mobile station detects packet error rates, frequent scale back, or consistent signal degradation (Paragraph 0011). These conditions (i.e. packet error rates, frequent scale back, and consistent signal degradation) are indicative of *the state of the signal* being used and NOT indicative of *initiating a communication* over a wireless network.

As illustrated in Figure 12, the SVR roaming process 1200 *begins while Radio A is already engaged in a voice traffic connection with Party C.* At step 1, an explicit call transfer (ECT) command is issued to the WWAN network so as to initiate transfer of the channel to the gateway that is hosting the WLAN Radio B (Paragraph 0069). At step 2, upon receiving the ECT command, the WWAN checks whether or not the gateway connected to Radio B is registered to the WWAN network and is answering the call (Paragraph 0070). At step 3, Radio

B verifies the call identification is from Radio A and immediately signals the gateway to accept the call. The WWAN receives confirmation that the gateway signaled acceptance of the call (Paragraph 0071). Therefore, *an explicit command is issued to initiate transfer of the channel between the WWAN network and the WLAN network as opposed to registering with a second network upon detecting a condition indicative of initiating a communication over a first network.*

Bridgelall thus discloses issuing an explicit call transfer demand to initiate the transfer of a communication between one network to another network when conditions indicative of the condition of the signal are detected. Specifically, Bridgelall does NOT disclose *detecting a condition indicative of initiating a communication over a first network and registering with a second network upon detection of the condition.*

In other words, in Applicants' claims, voice or data communication has not yet been initiated over the first wireless network. Only a condition indicative of initiating communication is detected, which initiates registration with the second network. Since no voice or data communication is yet established, and no registration with a second network has taken place, there can be no roaming yet. Since the entire teachings of Bridgelall occur after roaming has been established, Bridgelall does not teach or suggest Applicant's claims.

McConnell teaches *simultaneously* registering with a private and a public network (Figure 7 and column 18 lines 28-45). McConnell does NOT disclose *detecting a condition indicative of initiating a communication over a first network and registering with a second network upon detection of the condition.* McConnell, as admitted by the Examiner, is limited to teaching the <u>simultaneous</u> registration on a private and a public network, which is not the same as Applicant's recited limitations. Applicant's recited limitations require detecting a condition indicative of initiating communication in one network <u>before</u> registering or attempting to register with the second network. The teachings of McConnell do not make up for the deficiencies in the teaching of Bridgelall.

Since neither Bridgealall nor McConnell, independently or together, teach each and every element of independent claims 1, 11 and 16, they do not make obvious independent claims 1, 11 and 16. Therefore, Applicants respectfully request that this rejection be withdrawn and that the claims proceed to allowance.

Claims 2-10 depend directly or indirectly from claim 1 and are allowable over the cited art for the same reasons as claim 1.

Claims 12-15 depend directly or indirectly from claim 11 and are allowable over the cited art for the same reasons as claim 11.

Claims 17-25 depend directly or indirectly from claim 16 and are allowable over the cited art for the same reasons as claim 16.

Prior Art

The references cited but not relied upon are believed not to anticipate or make obvious Applicants' invention.

Summary

No amendment made was related to the statutory requirements of patentability unless expressly stated herein. No amendment made was for the purpose of narrowing the scope of any claim, unless Applicant has argued herein that such amendment was made to distinguish over a particular reference or combination of references.

The Applicants believe that the subject application, as amended, is in condition for allowance. Such action is earnestly solicited by the Applicants.
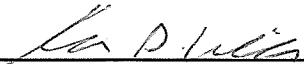
In the event that the Examiner deems the present application non-allowable, it is requested that the Examiner telephone the Applicant's attorney or agent at the number indicated below so that the prosecution of the present case may be advanced by the clarification of any continuing rejection.

Accordingly, this application is believed to be in proper form for allowance and an early notice of allowance is respectfully requested.

Please charge any fees associated herewith, including extension of time fees, to 502117, Motorola, Inc.

Respectfully submitted,

DATE: 6-19-06

SEND CORRESPONDENCE TO:
Motorola, Inc.
Law Department
1303 East Algonquin Road
IL01/3rd Floor
Schaumburg, IL 60196
Customer Number: 23330

By: _____
Kevin D. Wills
Attorney of Record
Reg. No.: 43,993
Telephone: 480-732-5364
Fax No.: 480-732-2402
Email: Kevin.Wills@motorola.com